Alabama Department of Environmental Management

Alabama NPS 2002 Annual Report

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ALABAMA NPS MANAGEMENT PROGRAM MISSION

To effectively and efficiently implement a comprehensive nonpoint source pollution management program designed to achieve, maintain, and/or protect beneficial uses of surfaces and ground waters using a flexible, targeted, and iterative river basin approach supported by broadly inclusive local stakeholder partnerships.

EXECUTIVE SUMMARY

The 2002 fiscal was very productive for the Nonpoint Source Program in Alabama. We have continued to address nonpoint source pollution to Alabama's waters through cooperative partnerships across the state. By working within our Alabama Clean Water Partnerships (CWPs), we have continued our success in implementing new community-based methods to improve and enhance our watersheds.

Sepulga River

Some of the highlights of 2002 include:

- Approximately 70% of the FY2002 Section 319(h) grant was distributed to fund watershed-targeted projects and assessments, with the remaining amount going towards statewide education and outreach projects and administration.

- Conducted and/or participated in several NPS education presentations and workshops across the state focusing on topics such as: volunteer water monitoring; stormwater Phase II; poultry litter distribution and storage; educating foresters on watersheds; onsite sewage; TMDLs and watershed planning; teacher NPS education; water festivals; proper pesticide disposal; the Alabama Envirothon and Envirobowl competitions; NEMO Alabama; stream restoration and hydrology; regulatory updates; aquatic environmental assessments; and erosion and sediment control.

- Worked with the ADEM TMDL program, the Alabama Clean Water Partnership, LEGACY, Inc., and Auburn University to develop two award winning videos to educate the public and decision makers on TMDLs.

- All ten river basin Clean Water Partnerships (CWPs) have been established and most have formed subwatershed groups. We continued to strengthen partnerships with the groups at local levels to address their concerns in priority watersheds.

- Watershed Restoration Action Strategies (WRASs) are currently being developed for numerous watersheds in the Tennessee, Coosa and the Black Warrior Basins. Guidance was developed and provided to the CWPs to help guide planning and implementation efforts. Completed WRASs for approved Section 319 funded priority watersheds are expected to be completed with 2 years.

- The annual ADEM NPS Conference was conducted in Birmingham in January 2002 in partnership with the Business Council of Alabama's *Waterquest* (primarily point source stakeholders). Major topics included NPS Priority Watershed Projects, TMDLs, and the NPS Management Program activities.

- In February of 2002, 29 TMDLs were approved by the EPA. These TMDLs address 20 waterbodies impaired by 29 pollutants that are contained in ADEM's 200 303(d) list.

Key Alabama NPS Management Program Goals

Monitor and assess water quality using a rotational waterbody approach.

Promote best management practice demonstration projects and implementation in priority (TMDL) watersheds and/or statewide.

Provide, promote, and coordinate education and outreach, technical assistance, technology transfer, and cost share.

Identify and coordinate local partnerships and stewardship.

Build on past successes and develop new and innovative initiatives.

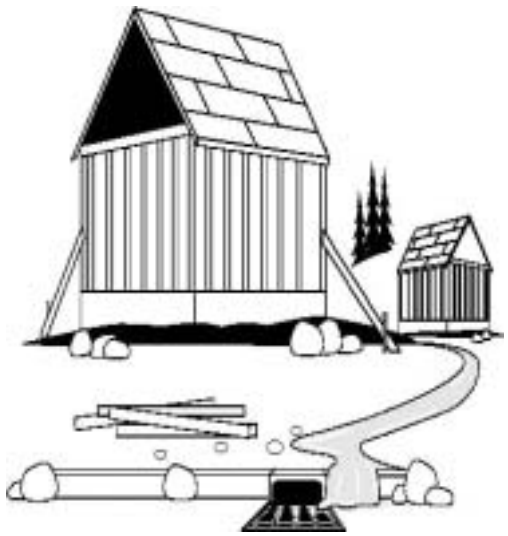
Continue enforcement and promote enforceable policies and mechanisms.

Provide measurable effectiveness, evaluation, and success documentation.

Overview - Nonpoint Source Pollution in Alabama

Nonpoint source pollution, also known as polluted runoff, is the number one contributor to water quality degradation of Alabama's waters. Nonpoint source pollution accounts for approximately two-thirds of the water quality impairments in Alabama's streams and lakes. Unlike point source pollution that enters waters at definite locations such as discharge pipes from wastewater treatment plants, nonpoint source pollution originates from numerous, often-diffuse sources. Nonpoint source pollution is usually associated with farming, logging, mining, urban, construction runoff/sedimentation, atmospheric deposition, land disposal, recreational activities, onsite sewage systems, riparian area degradation, and streambank destabilization. Contaminants can also be introduced to waters by day-to-day activities such as driving vehicles that leak fluids, misuse/overuse of lawn care products, dumping petroleum products and antifreeze down stormwater drains or into drainage ways, and improperly treating residential wastewater.

The 1989 Alabama Nonpoint Source Management Program provided a good statewide foundation to address nonpoint source pollution. However, since 1989, nonpoint source management efforts have greatly expanded in scope as a result of various changes to Section 319 nonpoint source grant guidance provided by EPA, emergence of new data and information, and as other priorities and needs evolved. In addition, new resources have been identified; innovative technologies have been produced and implemented; new and varied stakeholders have been identified; many partnerships have been formed; various regulatory and non-regulatory environmental protection efforts have been instituted; and new local, statewide, and holistic watershed expertise, management measures, and resources together, i.e., for all stakeholders to cooperatively "work off the same page." It will build upon the Year 2000 revised 1989 Alabama Nonpoint Source Management Program framework utilizing a flexible, targeted, iterative, broad-based approach to prevent and remediate nonpoint source impacted areas of the state.



The Fiscal Year 2002 Administration and Management Project Workplan provided the ADEM the flexibility to fund core administrative NPS program staff and provide essential management resources in order to effectively and efficiently implement the FY2002 CWA Section 319 grant and associated workplan projects.

In order to support a balanced statewide NPS Management Program, the FY2002 Section 319(h) workplan included projects that supported or addressed a variety of NPS categories including: river basin and watershed assessments, resource protection and watershed restoration; BMP demonstration projects; educational outreach; citizen volunteer water quality monitoring; NPS stakeholder input and participation; training and technology transfer, inspection and enforcement activities; surface and groundwater protection and assessments; watershed projects; as well as an overall NPS program approach to support institutionalization of Alabama's NPS Management Program.

2002 Showcase Projects & Accomplishments

Poultry Litter Distribution

The Poultry Litter Distribution Project in cooperation in the Tennessee Valley Resource Conservation and Development is well into its second year. This manure transport initiative is a voluntary program designed to assist in the transport of manure out of the high nutrient concentration watersheds in the Tennessee Valley to other areas in Alabama. Phosphorus loading in this region had begun to reach critical limits and thus an alternate management of this material is necessary. A composting facility in both Cullman and Marshall Counties has been constructed to demonstrate the benefits of alternate waste management along with marketing of the final product to areas outside the affected watersheds. In addition, the project includes sand litter demonstrations to reduce clean out volumes, established a poultry litter distribution "Hot Line", in addition to soil testing and litter management education. A part-time coordinator is responsible for overseeing these activities. The 319 funding of this project covers only transportation costs for litter hauling. From October 2001 to July 2002, approximately 6188.82 tons of poultry litter were transported out of the nutrient-rich lands in Cullman County. This translates to approximately 336,000 lbs. of N, 348,000 lbs. of P, and 270,000 lbs. of K collectively removed from the Duck, Cotaco, and 8-Mile Creek watersheds in the Tennessee Valley region (values based on NRCS Nutrient management technical guidelines).

Alabama Clean Water Partnerships

The Alabama Clean Water Partnerships continue to press on to bring together stakeholders of both private and public interest in order to protect and preserve our aquatic resources in Alabama. In 2002, the statewide partnership continued to meet quarterly, along with the technical and educational subcommittees. The technical subcommittee has been successful in developing a database template to house water quality data from the many different sources. Each of the 10 basin partnership can now use the template to develop their own database. The education subcommittee has also been very busy developing and pulling together information promoting the partnership and clean water. Materials developed include a Alabama Clean Water Partnership brochure, a TMDL general and technical video, public service announcements, an ACWP PowerPoint presentation, and various brochures and flyers. Individual basin CWPs across the have all continued to meet to work toward addressing concerns in their basins, developing watershed management plans, and securing grant funding for prioritized projects.

Choccolocco Watershed Project

Phase I of the Choccolocco Creek Watershed Project, in Calhoun, Cleburne, Clay and Talladega Counties in northeast Alabama completed their last 319 base funded contracts in March 2002. Cooperating agencies spent over $1,392,000.00 in federal and matched dollars to improve and manage their local water resources. Phase II of the Choccolocco Creek Watershed Project, encompassing the lower portion of the watershed, will finish their work in September of 2003.

PL-566 money was spent in clearing snags out of the creek channels and to stabilize the banks, to reduce flooding. 319(h) grants funded reducing sediment and erosion along stream channels, for educational programs, establishing best management practices, for surface water habitat and bioassessment monitoring, stream cleanups and public tours. In addition, twenty-five various BMPs were established along about 40 miles of creek involving at least 80 landowners. Also, the Calhoun County Health Department developed an inventory and mapping system of onsite sewage disposal systems, illegal dumps and alternative systems in the watershed. Volunteer water quality monitors were trained in the region, with the Boys Scouts and Girl Scouts helping in water quality monitoring and trash cleanups. A Sod BMP and Golf Course BMP Manual were also developed and sent to growers and superintendents in the watershed to reduce runoff from these operations. Also, five river basin stakeholder guides were produced and will soon be available to be distributed by the Clean Water Partnership groups.

BMP MANUALS FOR GOLF COURSES & SOD FARMS

Concerns about the impact of golf courses and sod farms on the water quality led to projects to development BMP manuals addressing NPS runoff from these sources. These FY1998 projects, which concluded in 2002, focused on the potential nonpoint source impact from herbicides, fungicides, and fertilizers applied to golf courses and sod farms. The BMP manuals are being distributed to golf courses, sod farms, and Extension Agencies throughout the state. This project also produced public outreach materials for presentation and adoption by golf course superintendents and coordinated BMP stakeholder training through state and regional short courses and meetings. Other accomplishments of this project include a September 2002 BMP seminar held as part of the Alabama Turfgrass Association Annual meeting, a golf course BMP video and compact disc, and continued monitoring, sampling, and demonstration projects at various golf courses.

CONSERVATION TILLAGE IN ALABAMA

The use of conservation tillage in Alabama continues to increase. An FY2002 survey conducted by local conservation partners revealed that 40 percent (684,000 acres) of all crops grown in Alabama used some form of conservation tillage. As farmers apply this environmentally-friendly farming method and share their success stories with others, the use of conservation tillage will continue to increase.

-courtesy of 2002 Alabama Annual Report NRCS

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM(EQIP)

In 2002, there were 651 conservation plans/contracts prepared on over 160,000 acres. These contracts provided $5,923,637 for Alabama farms. Alabama was able to fund only 55 percent of the total requests in FY2002. Some 530 requests totaling $4,783,780 were not funded. Funding provided by the 2002 Farm Bill should be adequate to fund the majority of these requests. EQIP provides geographically targeted technical, financial, and educational assistance to maximize environmental benefits.

-courtesy of 2002 Alabama Annual Report NRCS

ADEM BASIN SCREENING UPDATES

ALABAMA, COOSA, AND TALLAPOOSA NPS SCREENING

The final report for the *Tributary Embayment Water Quality Assessments of the Coosa, Tallapoosa, and Alabama River Basins 2000* was completed in 2002. The *Tributary Embayment and Mainstem Reservoir Water Quality Assessment of the Tombigbee and Escatawpa River Basins 2001* final report for the Survey was also completed in 2002.

Black Warrior/Cahaba NPS SCREENING GRANT

Screening level macroinvertebrate assessments, including a habitat assessment and physical characterization and chemical/physical parameters, were conducted at 63 stations in conjunction with the 2002 NPS Assessment of the Black Warrior and Cahaba River basins. An additional 41 sites were assessed in support of the Department's TMDL efforts. Fish IBI assessments were conducted at 34 study stations and 27 reference sites. Identification of macroinvertebrate and fish samples is in progress.

ECOREGIONAL REFERENCE CONDITION CHARACTERIZATION FY02

The sampling phase for the *Reference Condition Characterization for Ecoregions of the Black Warrior and Cahaba River Basins to Facilitate Development of Stream Nutrient Criteria* is nearing completion. Twenty-seven permanent and/or candidate ecoregional reference reaches were selected for inclusion in this study. Completed assessments have included six water quality sampling events with *in situ* field measurements, field observations, and collection of water samples for laboratory analysis. Three of the four planned habitat assessments have been completed.

Intensive biological assessments of the fish and/or aquatic macroinvertebrate communities were conducted at each of these reference reaches as part of the *FY02 NPS Screening Assessment of the Black Warrior and Cahaba River Basins*. Identified taxa lists and enumerations will be entered into the ADEM Mainframe PACE Aquatic Macroinvertebrate Database (MACINV) for calculation and reporting of multiple community metrics.

Areas of Concern

- **Watershed Management Plans**: The State continues to work with cooperators across the state in order to complete the watershed management plans (WMPs) as required for funding of priority watershed projects. Watershed projects in the Tennesee, Coosa, Mobile and Black Warrior River Basins are currently working towards completion of their WMPs.

- **Coastal NPS Program:** The State does not have a fully approved Section 6217 CZARA Coastal NPS Program. The final program revisions will need to be submitted to NOAA and EPA no later that June 30, 2003.

Agency Cooperators

1 **State Lead Agency:**
The Alabama Department of Environmental Management
Nonpoint Source Unit - Norman Blakey, Chief (334) 394-4354

2 **Other State Agencies:**
The Alabama Department of Public Health
The Alabama Forestry Commission
The Alabama Department of Economic and Community Affairs
The Alabama Department of Agriculture and Industries
Alabama A&M University
University of Alabama in Huntsville
Auburn University
Auburn University in Montgomery
The Alabama Department of Conservation
Geological Survey of Alabama
Soil & Water Conservation Commission
Troy State University
Alabama Natural Heritage Program

3 **Federal Agencies:**
Environmental Protection Agency
NRCS-USDA
US Geological Survey
Tennessee Valley Authority

4 **Local Agencies:**
Montgomery Water Works & Sanitary Sewer Board
CH2M Hill
Gadsden Water Works
Choccolocco Creek Watershed Conservancy District
Alabama Coastal Foundation
Cherokee County Commission
Boy Scouts of America - Tukabatchee Council
Paint Rock River Inititiative